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ABSTRACT

To determine the effect of early political instruction, a series of basic political concepts were introduced to primary grade children. Using one class of second and one class of fourth graders as control groups and one class of second and another class of fourth graders as experimental groups, a unit of civic instruction was taught during the 2-week period before a national election. The experimental groups received formal instruction in political concepts over a 3-week period and engaged in concept-related role playing activities. All children were given structured interviews before and after the period of instruction; these results were coded. Pre- and post-tests were the Science Research Associates achievement and primary abilities tests. Interview results showed that all groups increased in the average level of political concept-attainment during the election period, but the experimental groups increased more rapidly even when initial levels of political concept attainment and general school achievement were held constant. It is suggested that the young child is capable of understanding more about the political realm than is generally assumed and that school political instruction could profitably begin earlier than it normally does. Appendixes describe concepts, interviews, and changes in political conceptualization. (Author/DR)

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Technical Report No. 63

A PILOT EXPERIMENT IN EARLY CHILDHOOD POLITICAL LEARNING

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Report from the Project on Concepts in Political Science
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PREFACE

The overall purpose of the R & D Center's Program 2—Processes and Programs of Instruction—is to improve educational practice through the application of knowledge about cognition to instructional problems in disciplines such as political science.

This study is a pilot experiment in early childhood learning designed to gain information about whether young children are able to comprehend the basic structural ideas as government, leadership, law-making, political conflict, political parties and campaigning for office as part of an interconnected set of concepts about political phenomena.

This study conducted with second- and fourth-grade children clearly indicates that children at this age are capable of understanding more about the political realm than has been generally assumed. This report illustrates process-related research and contributes to the understanding of cognitive learning within instructional systems.

T. A. Romberg
Director of Program 2

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ABSTRACT

The present experiment is an attempt to introduce a series of basic political concepts pertaining to a system of democratic representation to children in the early grades of elementary school. The question to which an answer is given is: "Are young children able to comprehend such basic structural ideas as government, leadership, lawmaking, political conflict, political parties, and campaigning for office as part of some interconnected set of concepts which allow children to make better (and earlier) sense of political phenomena?"

Using four classes of second and fourth graders, an experimental unit of civic instruction was introduced during the period before a national election. The experimental groups received formal instruction in these concepts over a three-week period. In addition, children in the experimental groups engaged in concept-related role-playing activities. All children were individually interviewed both prior to the period of instruction and again immediately afterward.

The general finding was that all groups increased in the average level of political concept-attainment during the election period, but the experimental groups increased more rapidly. This finding holds true even when initial levels of political concept attainment and general school achievement are held constant.

Such an outcome would suggest that the young child is capable of understanding more about the political realm than is generally assumed and that school political instruction could profitably begin earlier than it now normally does.

I
INTRODUCTION

Political learning as an aspect of childhood and adolescent development has attracted new interest in the social and behavioral sciences of the last decade. Political science and education have generally led in these new efforts; but the contributions of psychologists and sociologists have also been important. In educational circles, renewed discussion has been carried on within the traditional rubrics of civic training and social studies education — particularly in relation to possible improvements of instructional strategies and curricula.[1] In political science, such inquiry has become crystallized as the new study of "political socialization."[2] In the latter, the scholarly literature has grown rapidly and investigation has taken a distinctively empirical, descriptive form. The content of political learning, its origins and sequence of development, and its relation to the broader social and political systems have been the most central questions of this research.[3]

Although these parallel interests among disciplines have been pursued independently to this point, there is growing recognition that closer cooperation ought to be fostered among the relevant academic fields. The preadult growth of political awareness serves potentially as a natural meetingplace for these several disciplines. The major difficulty in promoting cross-fertilization, however, comes in defining areas of mutual research interest. What form should common efforts take?

One possible answer is suggested by John Patrick's recent compilation of political socialization findings of potential use to curriculum specialists charged with drawing up civics and social studies programs for the schools.[4] His compendium defines an area of cross-disciplinary cooperation in which new knowledge about the content and staging of early political learning can be utilized to increase the efficiency of programs of civic instruction. In such implicitly joint endeavors, a division of labor is created between the political scientist, who collects descriptive or explanatory evidence, and the educational innovator, who reevaluates present instruction based upon his interpretation of the programmatic relevance of data generated by the political scientist. Because of the complementarity of subject matter and instructional expertise thus provided, a fruitful, pure-science—policy-science coordination is set in motion, with perhaps considerable promise for the future.

But this is only one alternative. An equally useful mode of cooperation might involve the political scientist more directly in the curricular creation process. He could play an active role in updating substantive content of curricula by interpreting new developments in political science to curriculum specialists. In this role, the political scientist acts as a subject-matter specialist rather than as an empirical researcher.

An example of advice that he might give would be encouraging greater attention to what are now well-established emphases in modern political science— such as the necessity for observation of political processes, individual political behavior, and the highly significant informal aspects of governing. These concerns of contemporary political science contrast markedly with the political science of two generations ago in which the main body of knowledge was distinctly historical, legal, and institutional. Unfortunately, the latter formalism still too often dominates the school civics and social studies curricula of contemporary American society.

Secondly, the political scientist in his role of subject-matter adviser could advocate greater attention in social studies programs to social science methodology and an attempt to teach the child to look occasionally at politics through the eyes of the social scientist. Dispassionate inquiry, scientific generalization, and capacity to evaluate the "hardness" of evidence are

perhaps as important to children's appreciation of the problems and institutions of their society as is the building of citizens through the more direct engagement of their supportive feelings. In some isolated instances, this innovative and consultative role of the political scientist in political education is being played already;[5] but it needs broader and bolder development.

A third possibility—and the one exemplified by the present inquiry—is for the political scientist to become engaged in research that relates both to descriptive and to evaluative aspects of political instruction programs. Here a clear instance of jointly empirical and "policy" oriented research might be participation by political scientists in experimentation with new content of early political learning, instructional devices, or sequence of development. Such an approach could comfortably combine the methodological and theoretical perspectives of educational and psychological research with the special background of the political scientist, i.e., his broad subject matter competence and experience in (non-experimental) political socialization research.

II
THE PRESENT STUDY

The pilot experiment reported below was designed to serve as an illustration of the third form of cooperation among disciplines. It is a tentative illustration of how one might attempt to combine the purposes of political and educational research. The general objective was to contribute simultaneously to learning theory, to political socialization theory, and to the available stock of educational innovations. The purposes of political research are served if we can obtain a clearer picture of when political learning might most profitably begin. Educational and psychological research could be advanced in terms of either the developmental psychology of conceptual behavior, experimentation in the area of social concept learning, or some combination of the two.

With reference to the last of these possibilities, Bourne has observed that, except for a few very recent efforts, little has been done in pursuing the developmental psychology of concept learning using an experimental approach. He says,[6] Another line of research, for which the treatment has been minimal, is the study of developmental changes in behavior. Experiments designed to explore performance of human beings at various levels or stages of growth hold great promise of supplying critical information on the evolution of complex cognitive or mental abilities and of a more complete understanding of adult behavior.

Research of an <u>experimental</u> nature on this problem is a surprisingly recent undertaking, and as a consequence, the available evidence is quite fragmentary, precluding the statement of strong or general conclusions.

HYPOTHESES

To see more specifically what possible contribution we might make, it is first necessary to sketch in the more specific theoretical background of the study and to spell out some operating hypotheses.

One important aspect of the theoretical environment of the present study from the perspective of recent political socialization research is a strong emphasis upon early learning. Contrary to what might have been assumed from the scattered empirical findings that existed prior to 1960, recent empirical work has suggested that the elementary school years are a period of extensive development and elaboration of political orientations, both cognitive and affective.[7] Young new members of the system do not suddenly make their political adjustment as they are about to attain political majority. Rather, society prepares them well in advance of political maturity; and they acquire a wide range of politically relevant expectations, perceptions, and beliefs even before adolescence.

One hypothesis that has been raised in relation to this finding is that whatever is taught in the tender years of childhood, when the child is most impressionable, is likely to be of considerable consequence for later learning and other behavior. What is taught, how it is presented, and at which precise moments in the learning cycle may be of considerable significance to future citizenly behavior and thus to the life of the system as a whole. If one of the goals of civic education is to make these early bonds as firm as possible, then upon this early learning hypothesis such a goal would have a better chance of attainment the earlier the child receives instruction that he can comprehend and assimilate.

One possible state of affairs that we might hypothesize to exist is that societies such as the American, which invest a great share of the total educational resources available to civic and social studies instruction in the middle and upper grades of elementary school,[8] have already reached a natural limit in how far down in the grades political education can usefully be introduced. The child's state of readiness for political learning may very well not be substantial enough to begin earlier than perhaps

fourth or fifth grade. Existing political socialization research has shown an especially high rate of change and fundamental shifts in various political images and cognitions at about this point, even though development is for the most part continuous thereafter into adolescence.[9]

An alternative hypothesis—and one that stimulated the present venture—is that political learning like any other cognitive learning can probably begin at least as early as first grade, if not before.[10] Jerome Bruner suggests that the major structural ideas of scholarly disciplines are essentially very simple and can be developed in a form that even young children can comprehend, if at first in unsophisticated terms.[11] We apply this hypothesis to our problem and propose that a possibility worth considering, both from a political and an educational standpoint, is that the beginning grades of school are an appropriate starting point for introducing the child to basic structural concepts pertaining to the political system.

Such early introduction of basic concepts is likely to have several benefits according to Bruner, viz., an increased ability to remember facts associated with these concepts, greater early comprehension of exemplary phenomena comprised by the concepts, and facilitation of transfer of learning to new situations and problems.[12] For the young school child, therefore, the advantage of earlier political learning—if such learning reflects the kinds of structural concepts employed by political scientists in their own more advanced analyses of the political system—is that he will be able to comprehend, remember, and adjust to the shifting phenomena of the political realm with greater facility than would normally be the case and advance more rapidly in later phases of his development. He should thereby reduce the extent of the booming, buzzing confusion that he might otherwise experience as he begins to make contact with the political world.

Earlier than normal contact with basic political concepts has potentially a triple utility therefore: the child makes more sense of politics as it intrudes into his consciousness; his later educational attainment in civic knowledge is likely to be higher; and the political system is able to enlist his support more readily and perhaps more firmly. Any of these three purposes might serve to make experimentation with earlier learning in this area worthwhile.

TREATMENT

To engage the young child of first or second grade in earlier political concept learning presumes a capacity on the part of the experimenter to set forth basic structural concepts of political understanding in terms that a mind almost totally innocent of political thought is able to grasp. Relative to physical science or mathematics—to take perhaps the extreme contrasts—political science lacks high consensus about the most fundamental structural elements of the discipline. Nevertheless, the investigator is not without important cues about what some of these essential concepts might be. This is true at least if attention is confined to a single system (in this case the American system) and to forms of political analyses that attempt to educe conspicuous general features of this system. To be of greatest value, these concepts should also have more general application to political phenomena and reflect substantial acceptance among the more productive practitioners of the discipline. Because of an assumed ability to meet these criteria, together with the fact of considerable familiarity to the present senior author, an adaptation of political "systems theory" was employed in devising the terms of the treatment of the experiment. The systems theory concepts adapted for present use come essentially from the work of David Easton.[13]

The special focus of the adaptation that we make of systems theory of politics to early political instruction concerns a subsystem of the political system that we might conveniently label "the system of political representation." The relevance of the latter to American politics is relatively straightforward. American democracy is in part institutionalized as a series of representative means of organizing popular demands for public policy decisions. Political parties and popular elections are at the forefront of this representative system, as are the elected leaders of the government when they engage in lawmaking activities concerned with processing political demands.

To organize a minimal set of these "representational" concepts for translation into terms young children are able to understand, we focus upon basic ideas like political conflict, government, leaders, the President, candidates, elections, campaigns, political parties, political party conventions, and laws and lawmaking.

We also attempt to connect these concepts to each other so that, for example, the child who understands that people have conflicts over various scarce, desirable things can understand why it is necessary to have a government which can decide among the contending political interests in a way that nearly everyone in the system will accept. One mode of insuring such acceptance is through the maintenance of a representative system—elections, parties, candidates, conventions and the like. After these processes have been carried out in the

proper manner, leaders like the President can make the necessary decisions to resolve conflicts, and these decisions can be enforced by various government workers such as policemen. At regular intervals, new elections are held, new leaders can be elected, and perhaps new laws telling people what they should do can be passed and enforced.

This, of course, is a very simple, child's language summary of what is involved in a political system as richly complex as that of the United States. Nevertheless, it conforms to basic concepts that several of the leading textbooks on American government would find agreeable and useful for introducing beginning college students to these complexities.[14] And it has the further advantage of reflecting several key concepts propounded in leading, general analytical schemes such as that of Easton. Translated into terms the child can understand, especially in relation to such external political events as U. S. Presidential elections, these concepts might very well form a nucleus of political understanding useful to the child. They aid him in interpreting new political stimuli and in more rapidly advancing his civic awareness in future years.

To operationalize these concepts for classroom instruction, we outlined them (see Appendix A) with brief written definitions and then held informal conferences with the two teachers who would instruct the experimental groups. In these sessions we elaborated the ideas, connected them into the simple system stated above, and answered any questions about their presentation to the children.

We also suggested that several of the concepts be dramatized by having the children simulate an election in their own classrooms, choosing parties and candidates and formulating policy platforms, holding campaigns, conventions, and elections. We especially emphasized that this electoral process should result in some policy decision directly related to the children's classroom activity, such as selecting a site for a class field trip. In addition, we encouraged the taking of a "straw vote" by the children on the national and statewide candidates who were themselves engaged in electoral activities at that time. The period of instruction and political role-playing by the children comprised the three weeks immediately prior to the 1964 Presidential election.

One of our presumptions was that all school children were likely to be stimulated to take some interest in politics during the climax of a Presidential campaign. Politics is in the air during such a period to a degree usually not true at other times. American society expends enormous communication resources to make the public politically aware and involved during major political campaigns. Thus, we could depend upon some degree of natural learning by both experimental and control group children to take place during the election period.

In the case of the control groups, we assumed that most of the cues flowing through the television screen or from haphazardly provided parental discussion would not take hold firmly as systematized cognizance of these political events. We suspected that there would be a general lack of the necessary base of political knowledge for the uninstructed young child to assimilate these random cues in any meaningful way. By providing the experimental groups with basic political instruction on the other hand, our expectation of their reception of these stimuli was precisely the opposite, viz., heightened interest and understanding. We thus relied somewhat upon greater than normal natural stimulation from the political environment surrounding the child; but we predicted that meaningful interaction with these stimuli should occur mainly for the instructed children. We hope, at some future time, to repeat the experiment in a politically more quiescent period.

We realized, of course, that even daily sessions in such instruction over a relatively short period constitute a weak stimulus. Thus we added the political role-playing activities more usual for later grades in most schools. We assume that in such personal engagement the instructed child is more apt to discern the functional relevance of the concepts presented by the customary formal lecture methods.

In summary, our treatment consists of a series of lectures in some basic concepts pertaining to the American political system. These concepts were suggested by recent work in political analysis applications of "systems theory," operationalized in terms of "a system of political representation." Formal instruction was combined with role-playing activities by members of the experimental groups, including classroom political parties, candidates, conventions, and elections, and a straw ballot taken with respect to the Presidential election being held at the end of the period of instruction.

SUBJECTS

Subjects for the experimental and control groups were four existing classrooms of second and fourth graders at two similarly situated schools near each other in a middle-class suburb of Chicago. A fourth- and a second-grade class in one school were chosen as the experimental groups, and a corresponding

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fourth- and second-grade class were used from the second school as the control groups.[15]

Some selected characteristics of each of the four groups are shown in Table 1. The groups are by grade relatively well matched in terms of sex, socioeconomic status, IQ, and achievement. Nevertheless, there are minor disparities in these matches which mean that in the analyses reported below we have had to pay attention to their possible effects.[16]

DATA COLLECTION

The kinds of political concepts which concern us depend for their observation upon the child's capacity or incapacity to articulate them. They could thus, for lack of a better description, be classified simply as "verbal concepts." It is possible that nonverbal tests for the presence of such concepts may eventually be devised; but we did not think it important in the present inquiry to attempt to do so. Thus, we collected as our observational data the (tape-recorded) verbal responses to a series of questions outlined in our structured interview schedule (Appendix B). Our interviewers asked these questions of each child in all four groups both immediately before the period of instruction and immediately afterwards (in each case over a period of approximately two weeks). In some cases, questions were missed either in the pretest or posttest interview, and in a number of cases the respondents were unable or unwilling to answer—or at least were judged to be so by the interviewer. Thus we have some problems of missing data. Nonetheless, by spending 20 to 30 minutes with each child both before and after the period of treatment, the interviewers collected a considerable body of interview material on the political concepts—and to a lesser extent on the political attitudes—of younger school age children.[17] A summary of the concept-related responses constitute the data reported below.

Observation and control of the treatment consisted primarily of initial instruction, occasional informal observation, and posttest interviewing of the participating teachers. We attempted to minimize interference with the natural instructional setting as much as possible.

SCORING

As we listened to the tape-recorded interviews with each child or read the transcripts

Table 1

Characteristics of Subjects, by Group

Index		Second Grade Experimental	Second Grade Control	Fourth Grade Experimental	Fourth Grade Control
Sex ratio[a]	$\bar{X}$	1.46	1.47	1.45	1.57
	SD	.50	.50	.50	.50
Achievement[b]	$\bar{X}$	33.29	31.65	60.96	55.48
	SD	4.52	4.96	11.71	11.71
IQ[c]	$\bar{X}$	—	—	113.2	107.4
	SD	—	—	10.91	9.61
Socioeconomic Status[d]	$\bar{X}$	67.46	65.00	65.70	65.33
	SD	14.28	14.77	14.53	17.83
N		24	21	24	23

[a] Males = 1, females = 2

[b] Composite achievement score on Science Research Associates Achievement test.

[c] Tests used for the fourth grade were the Science Research Associates Primary Mental Abilities tests; no scores were available for second grade.

[d] Occupational status was coded using Duncan's prestige scale. See Otis Dudley Duncan, "Properties and Characteristics of the Socioeconomic Index" in Albert J. Reiss, Jr., et al., Occupations and Social Status (New York: Free Press, 1961).

of these interviews, we were impressed by how some children are able to articulate many of the political concepts both before and after our treatment, how some are not able to do so even after instruction, and perhaps most interestingly, how some change from pretest to posttest, more often for the better. In a paper of this kind we cannot hope to represent fully the rich complexity of these free responses. Rather, we think it proper to attempt to simplify without greatly distorting the responses and thus obtain some confirmation of our intuitive assessments of their change or stability. If we can arrive at some relatively simple summary scores for each child, then we can examine the extent of change using statistical procedures.

We face two immediate questions in scoring these responses to show extent of political concept attainment. First, we must select the subset of all responses suitable to these purposes; secondly, we need to say something about the relative level of concept attainment for each political concept, ranging from very simple to complex, or advanced. Let us begin with item selection.

When we subdivide our structured interview into its item-elements or questions, we find that we have used sixty-two questions to cover our range of ideas and attitudes. For present purposes, we have eliminated all but thirty of these, for a variety of reasons. A number of items were dropped because they dealt with attitudes rather than concepts per se. These attitude items were usually answered simply as "yes" or "no" by the subjects. For example, the questions asking whether the child thought it a good idea to have political parties, conventions and campaigns were of this type. Some items were answered correctly by nearly everyone both before and after the experiment; thus, they failed to distinguish among respondents and were eliminated. A few items which showed that nearly everyone was confused were not used; and items where many responses were missing were excluded from the analysis.

The latter occurred where a child, in spite of the best efforts of the interviewer, would get into a pattern of inability or unwillingness to venture any responses at all for some portion of the questionnaire. Our criterion of exclusion was that if the item met all of our other tests but had fewer than 40 responses out of a possible 92, then we excluded it from the analysis. We were still left with a formidable missing data problem. Thus, we have had to rely upon a weighted combination of items for any individual's score.

To code level of concept attainment for any given item, we devised a simple scheme. Using our first question as an example, "What do you think government means?", we coded responses as follows:

0 -- don't know
1 -- irrelevant answer
2 -- simple, single, nonpolitical but appropriate answer (e.g., works, helps—but not laws, lawmaking, leaders)
3 -- mixed (e.g., two simple ideas, one simple idea plus one political concept, or laws, lawmaking, leaders, leadership)
4 -- complex (e.g., three ideas, or laws and leadership)
5 -- advanced (substantial discussion of several ideas, relating them to each other and to other aspects of the political system)
X -- no information (no answer, question not asked—either through error by interviewer or because of his assessment of child's inability to answer the item)

After coding all of the answers, we computed mean pretest and posttest scores for each respondent using only those items which the child answered on both the pre- and the posttest. A change score, defined as the difference between the pretest and posttest means, was then computed for each individual. With each child thus scored, we could proceed to analyze the extent of change, if any, between the time of the pretest and that of the posttest for each of the four groups.

RESULTS

One simple way to summarize the changes that occurred between interviews is to consider the mean change scores for each group of subjects. Table 2 presents these data.

We see first that both of the fourth-grade groups were higher in their political concept-attainment scores to begin with than were the children in the second-grade groups. Secondly, we find in each case that the experimental group changed more than did its corresponding control group, although the difference appears to be negligible at the fourth grade. All groups were higher at the end of the period than at the beginning. In the case of the control groups especially we might account for this increase by the random learning that undoubtedly occurs during the high stimulus period of a Presidential election. But for the second-grade experimental group, an additional increase may have come from the instruction. To make this speculation more firm, however, we should eliminate several

Table 2

Means and Standard Deviations of Pretest, Posttest, and Change Scores, by Group

Score	Second Grade Experimental		Second Grade Control		Fourth Grade Experimental		Fourth Grade Control	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Pretest Score	3.16	.35	3.11	.40	3.68	.27	3.45	.32
Posttest Score	3.68	.32	3.22	.41	3.83	.23	3.55	.30
Change Score	.52	.31	.11	.28	.15	.19	.10	.24
N =	24		21		24		23	

competing hypotheses, especially through the introduction of controls for other variables that could have been operative.

Some independent variables of special relevance are sex, socioeconomic status (SES), IQ, and achievement. Small but consistent sex differences in rate of political learning have already been documented in the descriptive literature on political socialization, and we would expect them to have an effect here. Boys have been found to learn political concepts and roles a little more quickly on the average than girls.[18] A similar effect pertains to those higher or lower in SES, IQ, or achievement.[19] Children higher on any one of these attributes are apt to lead their less advantaged fellows in the direction of aggregate development over the grades.

Table 3 presents the simple correlations of the change scores with these four variables, as well as with the pretest and posttest scores, by group. In the case of the fourth-grade control group we find these four characteristics to be markedly associated with the change scores, especially the two intellective variables, IQ and achievement.[20] To a somewhat lesser extent, they also show association with change scores in the other three groups.

To show the effect of the experiment directly we calculated a series of partial correlations removing the effects of the one of these four independent variables showing the highest correlation with our change scores, viz., achievement. In this analysis, we also combined the experimental and control groups at each grade to create a new dummy variable, "experimental treatment." It is the latter that is of greatest interest; and we can look at its relationship to the change scores while holding achievement constant. In order to control for differences in initial levels of political concept attainment, we also hold

Table 3

Zero-Order Correlation of Change Score with Pretest, Posttest, Sex, Socioeconomic Status, IQ, and Achievement, by Group (Pearson r)

Score or Variable	Second Grade Experimental	Second Grade Control	Fourth Grade Experimental	Fourth Grade Control
Pretest Score	-.53	-.31	-.53	-.47
Posttest Score	.39	.38	.21	.31
Sex[a]	-.24	.19	.11	.45
Socioeconomic Status	-.08	-.05	.13	.28
IQ	—[b]	—[b]	-.19	.61
Achievement	-.02	-.01	-.21	.73
N =	24	21	24	23

[a] Males = 1; females = 2.

[b] No IQ data were available for second grade.

constant the pretest scores. These data are presented in Table 4.[21]

What we observe in Part a of Table 4 is that the change scores are correlated with the treatment .57 in Grade 2 and .11 in Grade 4. In the case of Grade 2, this correlation is raised to .62 by controlling for the pretest scores (to control for regression effects), or to .61 by controlling both for pretest and achievement. For Grade 4 a similar effect is obtained when partial correlations are computed between change score and experimental treatment holding pretest constant (.31), or holding both pretest and achievement constant (.27). Achievement accounted for little of the change that occurred, but for slightly more at Grade 4. The experiment was successful in both grades, but somewhat more so in Grade 2.

One puzzle that immediately arises is why we were less successful at Grade 4 than at Grade 2. Two hypotheses might be advanced. First, our interviewing at Grade 2 was of more consistent quality, thus giving those children who did change a better chance to articulate their advances. Secondly, the second-grade teacher who carried out our instruction seemed to be more enthusiastic about the project than was the fourth-grade teacher. Both carried out our instructions, but the teacher of the younger children seemed more eager to carry them out fully, particularly in linking the formal concept presentation to the role-playing activities. She also seemed to put more emphasis upon class discussion of the concepts in the lecture portion of the instruction. Obviously, only subsequent research will be able to assess these explanations in terms of their relative influence. We suspect that the teacher variable is especially potent here, particularly because we were operating in a natural setting. Thus we were depending implicitly upon the quality of the relationships the teacher had already formed with her pupils and upon our ability to engage the two teachers equally in our task.

Table 4

Zero-Order and Partial Correlation of Change Score with Experimental Treatment, Achievement, and Pretest Score, by Grade

Correlation	(r) Grade 2	(r) Grade 4
(a) $r_{change, experiment}$	.57	.11
$r_{change, experiment.pretest}$	.62	.31
$r_{change, experiment.achievement, pretest}$	.61	.27
(b) $r_{change, achievement}$	.09	.31
$r_{change, pretest}$	-.30[a]	-.42[a]
$r_{change, pretest.experiment}$	-.42	-.50
$r_{change, experiment.achievement}$	.56	.04
$r_{change, achievement.experiment}$	-.01	.29
$r_{change, achievement.pretest, experiment}$	.16	.42
$r_{change, pretest.achievement, experiment}$	-.44	-.57

[a]These relatively large negative correlations are classic examples of the operation of regression. For a discussion of the meaning of such correlation, see the literature cited in Note 21.

III
CONCLUSION

DISCUSSION

One general hypothesis that recent research on political socialization has raised is that the American child prior to adolescence is likely to develop basic cognitive and affective orientations towards the political system, especially at what Easton has called the regime and political community levels.[22] The exact importance of this early learning for adult orientations and behavior is as yet unknown. Nevertheless, it has been hypothesized that such early political learning is highly resistant to change, relative to later learning. From this standpoint, it may be of considerable value to push political learning back to as early a stage as possible, given the constraints imposed by the child's general intellectual and emotional development. Relative to support for the political system, the plasticity of the young child and his susceptibility to cues from those strategically placed in authority over him and in emotional ties to him make early affective learning very difficult to dislodge.[23] Thus, the child who could form his major ties to the system by Grade 2 would be more resistant to apathy, disaffection, or alienation than would the child who only begins to learn his political roles later in childhood or in adolescence.

One of the conditions of attachment, we would think, should be minimal cognitive capacity to identify the system and some of its chief institutions and values. The child is able, only with great difficulty, to establish meaningful emotional ties to that which he cannot perceive. In addition, if a goal of instruction is to develop some critical political awareness, then a cognitive base ought to be established to give the child a capacity to assess the changing phenomena of politics and their possible effect upon preferred political goals and values. If we are able to aid the child in his efforts to form meaningful relationships with the system, both supportive and critical, then earlier learning could serve useful social functions therefore. Our pilot experiment need not be justified on these grounds alone, however, in that it could be useful simply as a device to aid the young child to make better sense of an otherwise abstract, complex and confusing set of activities that exist in a world external to him, but which at certain times impinge upon his consciousness.

That the factual conditions are possible for pushing political learning back to an earlier than usual stage is indicated by our results. We have found that stimulation of the young child's comprehension of the representational aspects of political system is possible— particularly for the second grader. Our stimulus, weak as it may have been, was enough to widen the younger child's vision of the representational system and to give him a greater capacity for assimilating new phenomena and concepts relevant to it.

IMPLICATIONS

Experimentation is a tool that is relatively unfamiliar to political science. If the political scientist has thought of experimental techniques at all, it is probably in connection with the college level use of simulation in the study of international politics,[24] bargaining,[25] or small group behavior.[26] Such areas have shown increasing use of experimental analogues of actual political situations in recent years. Some of these are true experiments in the same sense that educational or psychological experiments often are; and they employ many of the operations of a directly manipulative approach to causation.[27]

Perhaps a better parallel for the present study— although a less common kind of experimentation in political science— is the voting experiment, in which subjects are engaged who are making real political choices in their natural settings and are relatively uninfluenced by the

observational procedures.[28] There have also been at least two studies—the Turner Self-Government Study and the White and Lippitt Autocracy and Democracy experiments—that are even closer yet in substantive area of interest—political behavior—and types of subjects.[29] These, together with a few other isolated examples of experimentation involving actual political actors and behaviors,[30] form the political experimentation background for the present study.

We should point out that, in most of the latter studies, the main idea has been to get as close to the parameters that operate in the empirical world as possible. In one sense, therefore, the manipulations that were made might be thought to have had actual, if marginal, political consequences. The Gosnell and Eldersveld experiments with voters, for example, had the virtue of showing how manipulating variables affecting voting can influence actual decisions. These experiments, like our own, are suggestive of future lines of research over a wider range of political phenomena and causal variables.

This is not to say that such opportunities are unlimited. The political experimenter (of the academic variety) is apt to have fairly restricted opportunities to test his hypotheses with many types of political actors—although the Barber study cited above suggests that even certain political elites may become available to experimental inquiry. In addition, there are some unresolved ethical considerations which will have to be dealt with. Society-wide implications of such experimentation are easily perceived—much more easily than is the case for natural science experiments. (The latter, of course, also involve ethical questions—as natural scientists are more and more being brought to realize.)

We can argue, however, that political practitioners are constantly "experimenting" in the real governmental world, sometimes in an ill-advised and uncontrolled manner. Thus, political science experimentation with better scientific observation and control of procedures—and perhaps more alertness to some of the possible dangers to subjects—is not necessarily a worse mode of manipulating the political environment. Nevertheless, a basic difference remains: political practitioners are officially charged with the responsibility for the effects of their experiments, whereas social scientists are not.

In an experiment such as this one, we are acting in a role similar to that of the curriculum director or other school administrator who attempts politico-educational innovation. In our case, we resolved the possible ethical and political difficulties and the problem of access by obtaining the cooperation and approval of the curriculum supervisor, superintendent, and school principals.

One further problem that in some ways is connected both to the difficulty of access and to the ethical and political problems is the political scientist's own lack of familiarity with experimental techniques.[31] Relatively few political scientists have mastered the more advanced types of experimental design or the methods of analysis appropriate to them. The relative scarcity of genuine political science precursors for the present study is perhaps indicative of this lack of familiarity and thus the lesser likelihood of the political scientist's thinking about investigation in these terms.

But if political science can turn more to these research designs in the future, then some of the difficulties of causal inference that crop up inevitably in associational studies can be overcome.[32] And the political scientist can move away from what is now an over-reliance upon sample surveys. The need for cross-validation through multiple operationism is acute in modern-day political science.[33] Experimentation therefore offers a special opportunity for the future of scientific political inquiry.

Modest in scope as it may be, the present inquiry does show some real possibilities for the future. In demonstrating that earlier than normal political learning can be stimulated, we raise hypotheses for further testing of potentially significant consequence for political socialization theory and for theories of learning and child development. Perhaps we also suggest some practical tools that might be refined for future use in the elementary school's social studies curriculum—in our concepts of political representation. We may hope to give, by this example, a greater impetus to the uses of experimentation in political analysis more generally. And, finally, we would like to demonstrate how one form of cross-disciplinary cooperation might be fostered between political scientists and educational specialists.

NOTES

1. See, for example, Franklin Patterson, The Adolescent Citizen, (Glencoe, Ill.: The Free Press, 1960); or Donald W. Robinson, et al. Promising Practices in Civic Education (Washington, D.C.: National Council for the Social Studies, 1967).
2. For overviews of the political socialization field, see Jack Dennis, "Major Problems of Political Socialization Research," Midwest Journal of Political Science, Vol. 12 (Feb., 1968), pp. 85-114; Fred Greenstein, "Political Socialization," International Encyclopedia of the Social Sciences (New York: Crowell-Collier, 1968); and Richard E. Dawson, "Political Socialization" in James A. Robinson (ed.), Political Science Annual: An International Review, Vol. I (Indianapolis and New York: Bobbs-Merrill, 1966).
3. See, for example, Herbert Hyman, Political Socialization (New York: Free Press, 1959); Fred Greenstein, Children and Politics (New Haven: Yale University Press, 1965); Robert D. Hess and Judith V. Torney, The Development of Political Attitudes in Children (Chicago: Aldine, 1967); and David Easton and Jack Dennis, Children in the Political System, forthcoming (New York: McGraw-Hill, 1969).
4. John J. Patrick, Political Socialization of American Youth: Implications for Secondary School Social Studies, Research Bulletin No. 3 (Washington, D.C.: National Council for the Social Studies, 1967).
5. The High School Curriculum in Government at Indiana University, The Lincoln Filene Center for Citizenship and Public Affairs of Tufts University, and the work of such individual scholars as Lee Anderson of Northwestern University or Robert Cleary of American University provide examples of this role.
6. Lyle E. Bourne, Jr., Human Conceptual Behavior (Boston: Allyn and Bacon, Inc., 1966), page 123. Also see Tracy S. Kendler, "Concept Formation," Annual Review of Psychology, Vol. 13 (1961), pp. 447-472; W. Fowler, "Cognitive Learning in Infancy and Early Childhood," Psychological Bulletin, Vol. 59 (1962), pp. 116-152; and J.S. Bruner "The Course of Cognitive Growth," American Psychologist, Vol. 19, (1964), pp. 1-15.
7. See, for example, Easton and Dennis, op. cit.; Hess and Torney, op. cit.; and Greenstein, Children and Politics.
8. See the evidence presented in George Z.F. Bereday and Bonnie B. Stretch, "Political Education in the U.S.A. and U.S.S.R." Comparative Education Review, Vol. 7 (1963), pp. 9-16.
9. See, for example, the kinds of age trends shown in Jack Dennis, Leon Lindberg, Donald McCrone, and Rodney Stiefbold, "Political Socialization to Democratic Orientations in Four Western Systems," Comparative Political Studies, Vol. I (1968), pp. 71-101.
10. See Easton and Dennis, op. cit.; and "The Child's Image of Government," The Annals of the American Academy of Political and Social Science, Vol. 361 (1965), pp. 40-57.
11. Jerome Bruner, The Process of Education (Cambridge, Mass.: Harvard University Press, 1960).
12. Ibid.
13. David Easton, "An Approach to the Analysis of Political Systems," World Politics, Vol. 9 (1957), pp. 383-400; A Framework for Political Analysis (Englewood Cliffs, N.J.: Prentice-Hall, 1965); A Systems Analysis of Political Life (New York: John Wiley & Sons, 1965).
14. See, for example, Marian D. Irish and James W. Prothro, The Politics of American Democracy (Englewood Cliffs, N.J.; Prentice-Hall, Fourth Edition, 1968); or

Charles R. Adrian and Charles Press, The American Political Process (New York: McGraw-Hill, 1965).

15. The division of experimental and control by school, while not as desirable as randomized selections, was necessary in order to avoid contagion effects.
16. Our experimental design for either the second- or fourth-grade groups would be as follows, using the Campbell-Stanley paradigms:

$$O_1 \quad X \quad O_2$$
$$O_3 \qquad O_4$$

See Donald T. Campbell and Julian C. Stanley, "Experimental and Quasi-Experimental Designs for Research on Teaching," in N.L. Gage (ed.), Handbook of Research on Teaching (Chicago, Ill.: Rand McNally, 1963), pp. 171-246.

17. These individual interview data probably constitute the largest single collection of personal interviews with early grades, American school children concerning their political concepts and attitudes—which is suggestive of the paucity of research of this kind, either associational or experimental.
18. See Easton and Dennis, Children in the Political System; Hess and Torney, op. cit.; Greenstein, Children and Politics, and "Sex-Related Political Differences in Childhood," The Journal of Politics, Vol. 23 (1961), pp. 353-371.
19. See Easton and Dennis, Children in the Political System; Hess and Torney, op. cit.; Greenstein, Children and Politics; Hyman, op. cit.; and Elliott White, Intelligence and Political Behavior: A Case Study in Political Socialization, Ph.D. dissertation, Department of Political Science, University of Chicago, 1966.
20. For the fourth-grade control group there is significant overlap among these four independent variables in some cases; for example, sex and achievement are correlated .42. See Appendix D which presents the R matrix for each group.
21. This control for pretest level is only one of several things we have done to counter the possibility that the changes we observe are due to a statistical artifact—regression toward the mean. Statisticians have yet to offer perfectly satisfactory solutions to the problems involved with controlling for regression effects, but we have tried to adopt as conservative an approach as possible. For instance, before presenting the mean change for each group (Table 1), we considered that such a form of analysis always biases the results in favor of the groups with the lowest pretest scores. In our case, both groups receiving the experimental treatment scored higher than the control groups. Thus, any difference we report as being due to the experimental stimulus appears in spite of whatever regression effects may be present. For discussion of various techniques to use in controlling for regression effects, see Carl Bereiter, "Some Persisting Dilemmas in the Measurement of Change" and Frederic M. Lord, "Elementary Models for Measuring Change" in Chester W. Harris (ed.), Problems in Measuring Change (Madison, Wis.: The University of Wisconsin Press, 1963), pp. 3-38.
22. See the works of Easton cited above in Note 12.
23. See Orville G. Brim, Jr., and Stanton Wheeler, Socialization after Childhood: Two Essays (New York: John Wiley & Sons, 1966); Greenstein, Children and Politics, esp. pp. 79-84; and Robert D. Hess and David Easton, "The Role of the Elementary School in Political Socialization," The School Review, Vol. 70 (1962), pp. 257-265.
24. Harold Guetzkow, et al., Simulation in International Relations (Englewood Cliffs, N.J.: Prentice-Hall, 1963); Harold Guetzkow (ed.), Simulation in Social Science: Readings (Englewood Cliffs, N.J.: Prentice-Hall, 1962); Bernard C. Cohen, "Political Gaming in the Classroom," The Journal of Politics, Vol. 24 (1962), pp. 367-381; Richard C. Snyder, "Some Recent Trends in International Relations Theory and Research" in Austin Ranney (ed.), Essays on the Behavioral Study of Politics (Urbana: University of Illinois Press, 1962); Lincoln Bloomfield, "Political Gaming," United States Naval Institute Proceedings, Vol. 86 (1960), pp. 57-64; Herbert Goldhamer and Hans Speier, "Some Observations on Political Gaming," World Politics, Vol. 12 (1959), pp. 71-83.
25. See, for example, Sidney Siegel and Lawrence Fouraker, Bargaining and Group Decision-Making: Experiments in Bilateral Monopoly (New York: McGraw-Hill, 1960).
26. See, for example, Sidney Verba, Small Groups and Political Behavior (Princeton: Princeton University Press, 1961); Robert Golembiewski, The Small Group (Chicago: University of Chicago Press, 1962); Barry E. Collins and Harold Guetzkow, A Social Psychology of Group Processes of Decision-Making (New York: John Wiley & Sons, 1964); John W. Thibaut and Harold H.

Kelley, The Social Psychology of Groups (New York: John Wiley & Sons, 1961).

27. A difficulty with international politics simulations or other similar activities for present purposes is that they do not deal with natural settings and the behavior of people in "real life" situations. This is not to say that such efforts are not useful instructional devices or that nothing of application to the real world can be found in them. It is just that they do not seem to be a good model for the kind of study undertaken here.
28. Harold F. Gosnell, Getting out the Vote (Chicago: University of Chicago Press, 1927); Samuel J. Eldersveld and Richard W. Dodge, "Personal Contact or Mail Propaganda? An Experiment in Voting Turnout and Attitude Change" in Daniel Katz, et al. (eds.), Public Opinion and Propaganda (New York: Holt, Rinehart, Winston, 1954), pp. 532-542; and Samuel J. Eldersveld, "Experimental Propaganda Techniques and Voting Behavior," The American Political Science Review, Vol. 50 (1956), pp. 154-165.
29. Marion E. Turner, The Child Within the Group: An Experiment in Self-Government (Stanford, Calif.: Stanford University Press, 1957) and Ralph K. White and Ronald Lippitt, Autocracy and Democracy (New York: Harper, 1960).
30. See, for example, James David Barber, Power in Committees: An Experiment in the Governmental Process (Chicago: Rand McNally, 1966). For further references to other types of relevant experimentation, see Richard C. Snyder, "Experimental Techniques and Political Analysis: Some Reflections in the Context of Concern over Behavioral Approaches" in James C. Charlesworth (ed.), The Limits of Behavioralism in Political Science (Philadelphia: The American Academy of Political and Social Science, 1962), pp. 94-123.
31. See Snyder's discussion of this problem in his "Experimental Techniques and Political Analysis," op. cit.
32. For an analysis of these problems see, for example, Hubert M. Blalock, Jr., Causal Inferences in Nonexperimental Research (Chapel Hill, N.C.: University of North Carolina Press, 1961).
33. See the discussion of such questions in Eugene J. Webb, et al., Unobtrusive Measures: Nonreactive Research in the Social Sciences (Chicago: Rand McNally & Company, 1966).

APPENDIX A

BASIC CONCEPTS IN THE UNIT OF INSTRUCTION

I. What is government?
   A. Why do we need government?
   B. What does the government do?
      (e.g. The government is a group of people (organization) who do something— make authoritative decisions, perform actions, enforce laws, for the whole society.)

II. What are laws?
   A. Why do we need laws?
   B. What would it be like if we didn't have laws?
      (e.g. Laws are binding rules made and enforced by the government because potentially and actually there are conflicts and disagreements among the members of society.)

III. Who are the leaders of our government?
   A. Who is the President?
   B. What does the President do?
   C. Are all of the people who work in the government leaders?
   D. Who are some other leaders and government workers?
      (e.g. Someone has to be chosen to be the authority who makes the decisions that issue in laws and apply to everyone. There are helpers as well as leaders who help make or enforce the laws.)

   How does the President get his job?
      (Ways of getting people for these jobs)

IV. What is a political party?
   A. What does a political party do?
   B. Why are some people Democrats and other people Republicans?
      (e.g. Parties are groups of people who organize different sides in causes and help recruit new government leaders. People "belong" to the party they agree with— but they may change.)
         [Division of room into two parties, selection of names for classroom parties]

V. What is a political convention?
   A. What is a political convention for?
   B. What happens in a political convention?
      (e.g. A political party has a convention (a big meeting) to get people in the party to agree on who the candidates for the job of leader will be. Once he is chosen the candidate must push for his party's cause.)
         [Meeting of each party's convention. Selection of Presidential candidate from each party].

VI. What is a political campaign?
   A. What happens in a campaign?
   B. Why do candidates campaign?
   C. How do candidates campaign?
      (e.g. Through the campaign the candidates try to rally votes (persuade people who haven't yet taken sides and to keep people loyal to the party.)
         [Planning of each party's campaign]

VII. When parties campaign and disagree, is this all right? Should they disagree or not?
   A. What do the parties disagree about?
   B. Is there anything about which the parties should always agree?
      (e.g. Parties disagree on who should be the leaders and on specific policy issues, but they agree on "the rules of the game" and the need to maintain a system that can solve people's conflicts peacefully. As long as this is true, disagreement is not only right but healthy.)
         [Preparation of campaign]

VIII. Presentation of campaign speeches
         [Discussion of national campaign]

IX. What is an election?
   A. What is the election for?
   B. How does it work?
      (e.g. The election is when people vote for the two candidates and the one who gets the most votes wins.)

X. Final campaign speeches, Mock Election, straw vote on national election

XI. What happens after the election is over? Do you think that the party that loses should accept the winner?
(e.g. Acceptance of the winner is part of the rules of the game that must be followed if the way we choose leaders in elections is to survive.)
[Announcement of the winner of the Mock Election]

XII. Is an election a good way of choosing the President?

A. In what other ways could we choose our political leaders?

B. Why are elections a very good way?

C. Review of basic concepts and relationships.
(Elections are a fair way to choose our leaders because everyone who gets to vote has a chance to voice his opinion about who the leaders should be. Other ways such as by having a single person appoint the leaders or through heredity do not give everyone a part in the decision.)

APPENDIX B
INTERVIEW SCHEDULE

I'd like to talk to you to find out what you think about various things. This isn't a test and you won't get any grade; I'd just like to know what you think.

First, let's talk about government. What do you think government means? Can you tell me what the government does? Why do we need the government? Do you like the government?

What about laws? Can you tell me what a law is? How do we get laws? Why do we need laws? Do you think it's a good idea to have laws? What would happen if we didn't have any laws?

Can you tell me what a leader is? Do you know who some of the leaders of our government are? (If not spontaneously mentioned by child: Is the President a leader of our government?) Do you know the name of our President? (Is the mayor a leader of our government?) Do you know the mayor's name? Who are some other leaders of our government? What about the policeman, is he a leader of our government? Is the fireman? Is the teacher? Is the milkman? Are all people who work for the government leaders?

Let's talk some more about the President. What kind of man do you think he is? Do you like the President? What do you think the President does? How do you think the President gets his job?

Have you ever heard of political parties? What are the names of the political parties? (If no spontaneous response: Two political parties are the Democrats and the Republicans.) Have you ever heard those names? Can you tell me what the Democrats and Republicans do? If you could vote do you think you would be a Democrat or a Republican or neither? How important do you think it is that the (D)'s (R)'s win the election? Is it very important, a little bit important, or not important to you? Why do you think some people are Democrats and other people are Republicans? Do you think there is a difference between the Democrats and the Republicans? (Do the Democrats and the Republicans want the same man to be President? Do the Democrats and the Republicans want the same laws to be made?) Why do these people disagree? Do you think it's O.K. for them to disagree? Do you think it's a good idea to have political parties?

This is a picture of a political convention. Did you see the political conventions on television this summer? Why do we have political conventions? What happens in a political convention? Do you like political conventions? Do you think it's a good idea to have political conventions?

What about a political campaign, can you tell me what a political campaign is? Why do we have political campaigns? This is a picture of a man making a political campaign speech. Have you heard any political campaign speeches? Why do men make these speeches? This is a picture of a car with a political campaign sticker. Have you seen any cars with political campaign stickers? Do you like political campaigns? Do you think it's a good idea to have them?

When parties campaign and disagree is this all right do you think? Should they disagree or not? Are there some things on which all parties should agree? What are they?

In November we are going to have an election. Why do you think we have elections? What happens in elections? How does an election work? What happens to the man who wins the election? What happens to the man who loses? Do you think it's a good idea to have elections? Do you think elections are a good way of getting political leaders? What are some other ways of getting leaders? If you could vote in this election, for whom would you vote?

In about a month we'll be talking to each other again so I'll see you then. Thank you very much for telling me what you think.

APPENDIX C

ITEMS USED FOR CONSTRUCTING CHANGE SCORES

1. Can you tell me what the government does? (first choice)
2. Why do we need a government?
3. Can you tell me what a law is?
4. How do we get laws?
5. Why do we need laws?
6. What would happen if we didn't have any laws?
7. Can you tell me what a leader is?
8. Do you know who some leaders in government are?
9. Is the governor a leader in government?
10. Is the mayor a leader in government?
11. Is the teacher a leader in government?
12. Is the policeman a leader in government?
13. Is the fireman a leader in government?
14. Is the milkman a leader in government?
15. Do you think that all people who work for the government are leaders?
16. What kind of a man do you think the President is?
17. What do you think the President does?
18. How do you think the President gets his job?
19. Have you ever heard of political parties?
20. Have you ever heard of the Republicans and the Democrats?
21. Can you tell me what the Republicans and the Democrats do?
22. Why do you think that some people are Democrats and some are Republicans?
23. Do you think that there is a difference between Republicans and Democrats?
24. Do the Democrats and the Republicans want the same laws to be made?
25. Did you see the political conventions on TV this summer?
26. Why do we have political conventions?
27. Why do these men make speeches? (follow-up to seeing men make speeches)
28. How does an election work?
29. What happens to the man who wins the election?
30. What happens to the man who loses?

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APPENDIX D
MATRICES OF CORRELATION, BY GROUP

Second Grade, Control

	Change Score	Posttest Score	Pretest Score	IQ	SES	Achievement
Sex	.19	-.09	-.23	—a	-.02	.07
Achievement	-.01	.35	.36	—a	.04	
Socioeconomic Status	-.05	.10	.14	—a		
IQ	—a	—a	—a			
Pretest Score	-.31	.76				
Posttest Score	.38					

N = 21

Second Grade, Experimental

	Change Score	Posttest Score	Pretest Score	IQ	SES	Achievement
Sex	-.24	-.11	.11	—a	-.01	-.02
Achievement	-.02	.35	.34	—a	.43	
Socioeconomic Status	-.08	.04	.11	—a		
IQ	—a	—a	—a			
Pretest Score	-.53	.58				
Posttest Score	.39					

N = 24

a - No Second Grade IQ scores were available

Fourth Grade, Control

	Change Score	Posttest Score	Pretest Score	IQ	SES	Achievement
Sex	.45	-.20	-.53	.34	.36	.42
Achievement	.73	.28	-.29	.69	.31	
Socioeconomic Status	.28	.36	.13	.22		
IQ	.61	.53	.04			
Pretest Score	-.47	.69				
Posttest Score	.31					

N = 23

Fourth Grade, Experimental

	Change Score	Posttest Score	Pretest Score	IQ	SES	Achievement
Sex	.11	.45	.31	.03	.02	.12
Achievement	-.21	.55	.60	.75	-.24	
Socioeconomic Status	.13	.05	-.05	-.07		
IQ	-.19	.44	.55			
Pretest Score	-.53	.71				
Posttest Score	.21					

N = 24

APPENDIX E

EXAMPLES OF CHANGES IN POLITICAL CONCEPTUALIZATION OF SECOND-GRADE EXPERIMENTAL GROUP

In order to show in greater detail some of the individual changes that occurred between pretest and posttest, we present below a few examples of actual responses by our second-grade experimental group. In the left-hand column we show the initial responses of the child together with the interviewer's questions. On the right is presented the posttest interview questions and responses. Along with the portion of the interview that we have selected for each of the children, we provide our own comments.

Before examining these interviews, it is necessary to point out that we are emphasizing in this section only those areas that showed greatest change in one of our experimental groups. In Table 1, we present the mean change for each item by group. Examination of this table gives perspective to the quotations presented below. In general, we have concentrated in the interview quotations on items which showed a change of one point or more; we have, however, included items which changed less when they are part of a natural sequence.

Table 1

MEAN CHANGE IN ITEM BY GROUP

ITEM	GROUP				
	2E	2C	4E	4C	N
Can you tell me what the government does? (first choice)	1.82	.12	.70	.43	76
Why do you need a government?	1.00	.00	.04	-.08	66
Can you tell me what a law is?	.87	.20	.17	-.37	85
How do we get laws?	.41	-.06	-.10	.53	80
Why do we need laws?	.28	.08	-.37	-.33	56
What would happen if we didn't have any laws?	.30	-.06	.60	-.27	64
Can you tell me what a leader is?	.25	.10	.04	.00	86
Do you know who some leaders in government are?	.74	.55	.14	.31	63
Is the governor a leader in government?	.39	-.15	.23	.11	76
Is the mayor a leader in government?	.00	.27	-.29	.27	62
Is the policeman a leader in government?	.00	.05	.17	.00	90
Is the fireman a leader in government?	.10	-.14	-.21	.00	86
Is the teacher a leader in government?	.00	.27	.12	-.10	89
Is the milkman a leader in government?	.05	.18	.08	.11	87
Do you think that all people who					

(Table 1 continued)

ITEM	GROUP				
	2E	2C	4E	4C	N
work for the government are leaders?	.16	.20	-.05	.29	60
What kind of a man do you think the President is?	.25	.25	-.17	-.26	86
What do you think the President does?	.38	.10	.27	.47	86
How do you think the President got his job?	.87	-.35	.27	.38	86
Have you ever heard of political parties?	.86	.23	.39	-.05	81
Have you ever heard of the Republicans and the Democrats?	.25	.12	.20	.00	37
Can you tell me what the Republicans and the Democrats do?	1.64	.06	.36	.00	67
Why do you think that some people are Democrats and some are Republicans?	1.08	.50	.42	-.17	45

ITEM	GROUP				
	2E	2C	4E	4C	N
Do you think there is a difference between Republicans and Democrats?	.20	.00	.28	.00	43
Do the Democrats and Republicans want the same laws to be made?	.00	-.20	-.37	.00	42
Did you see the political conventions on TV this summer?	.21	-.09	.04	.10	90
Why do we have political conventions?	.45	-.20	-.17	-.40	44
Why do these men make speeches?	1.10	.58	.55	.31	58
How does an election work?	1.15	.24	.28	.47	61
What happens to the man who wins the election?	.25	.07	.00	.13	71
What happens to the man who loses?	.95	.47	.14	.19	72

INTERVIEW RESPONSES

Government and Laws

COMMENT:

As we discussed earlier, our instruction was designed to direct the child's attention away from the personalized and protective aspects of government to a more abstract notion of rule-making and conflict settlement. The quotations in this section reflect a remarkable change in perspective. Much of the language of the posttest is, of course, still childish; but it is clear that law making has become attached to the general concept of government.

Pretest	Posttest
GIRL 1	
I. What do you think government means? S. Well, the government helps the president. He's like a president, but he's not a president.	I. What do you think government means? S. Oh, a person who makes laws. I. Anything else? S. A rule...oh, nothing.
I. What does the government do? S. I don't know.	I. O.K. What do you think the government does? S. Well, he helps solve problems and makes rules so he can help people.
I. Why do we need a government? S. Well, because he helps the president.	I. O.K. Why do we need a government? S. So, to make rules.
GIRL 2	
I. Do you know what government means? S. He's the owner of the United States; he makes sidewalks and streets, and that's all.	I. The first thing I want to talk about is government. What do you think government means? S. Eee, ah, it's somebody who takes care of everybody, and um, one part here when they want something, and the other one, um, another part's here, and they, and they both want one thing, and the government settles it.
I. What does the government do? S. Well, he helps people.	I. O.K. What does the government do? S. He helps peo...other people, and he settles problems.
BOY 1	
I. Well, if you were just going to make a guess about what government is what would you say it is? S. It's a man who, um, well, tells people that they could do, um, things and not.	I. Well, what does the word government mean? What do the people talk about when they talk about government? What's the government? S. Well, who makes the rules and the laws.
BOY 2	
I. What do you think the government is? S. I don't know.	I. One of the first things I'd like to ask you is, what do you think government means? S. Well, it's a group of people who...It's not just one person, it's a group of people that act, that run the country. The top government is President Johnson.
I. Do you know what a government does? S. Well, I suppose it protects our country.	I. What do you think the government does? S. Well, I think it runs the country and makes laws.

GIRL 3

I. Well, have you ever heard people talking about government?
S. No.
I. No. Can you think of any place you might have heard the word government before?
S. No.
I. What do you think that word might mean? Government?
S. Like Percy or?
I. Mhm....
What other sorts of things do you think about when you think about government?
S. Percy and uh, I guess that's about all.

GIRL 4

I. When you're watching television have you ever heard them talking about government?
S. No.
I. Have you ever heard anybody talk about government?
S. Mm.
I. Do you think you've ever heard the word government before?
S. Mhm.
I. Where have you heard the word?
S. My mom and dad use it.
I. Uh huh, What do you think they mean when they talk about the government?
S. I don't know; they use words that I don't understand.
I. What do you think they are talking about when they talk about the government? What are some of the things they say?
S. Um.
I. What do you think government might mean?
S. Well he's a man.
I. Uh huh, And what do you think the government does?
S. He... is a real rich man that he'd get all the money and give it to people.

I. First, let's talk about government. What do you think government means?
S. Well, the man helps make laws like I said last time and well, rules, yea, rules are laws, well, he helps make laws as I said and that's about all I can think of.
I. Can you think of anything else that the government does?
S. Uh...help people by making laws so they don't get hurt.

I. What do you think government means?
S. Somebody that makes rules.
I. Uh, huh, And what do you think the government does?
S. Well I don't exactly know cause I never saw him.
I. Well, what do you think?
S. He sees that the laws are obeyed.

COMMENT:

When we talk about the concept of government we should remember that for many young children government is apt to be visualized as a single person. This is particularly illustrated in the construction, "the government, he" which many of the children use.

Another way to look at the linkage of <u>government</u> and <u>law</u> is to consider the response to a direct question about laws. Only two such responses are presented below; but the answers are typical of many.

Pretest

BOY 3

I. How do you think we get laws?
S. The President makes 'em up?

Posttest

I. How do you think we get laws?
S. Well, the government, um, gets a group of people and he makes the laws and if the people agree, um, it'll turn out to be a law.

GIRL 3

I. Where do you think the laws come from?
S. The police or someone important like that.

I. How do we get laws?
S. The government makes them.

Political Parties

COMMENT:

If children are to understand American elections, it is important that they recognize not only specific candidates but also the more enduring institutions of political parties. The fact that these children can recall the names of the parties on the posttest indicates that they have identified the two major groupings of candidates. This is an area where our instruction was clearly successful. The quotations presented below are rather long because the sequence of questions about parties is difficult to decompose into small segments.

Pretest

Posttest

GIRL 5

I. Have you ever heard of political parties?
S. No.
I. Have you ever heard of the Republicans and the Democrats?
S. Yes.

I. They are political parties. Can you tell me what they do?
S. No.
I. If you could vote, who do you think you would vote for?
S. Johnson, if I could. But I'm not twelve yet.

I. Have you ever heard of political parties?
S. Um, yeah.
I. Do you know the names of two political parties?
S. Yes.
I. What are they?
S. Republicans and Democrats.
I. What do Republicans and Democrats do?
S. They join together, and then they get, they get a leader, and they vote.
I. If you could vote, what do you think you would be, a Republican or Democrat?
S. I don't know. I don't know the difference.
I. What do you think? Do they want the same man to be President?
S. No, they want their own.
I. O.K. Do they want the same laws to be made?
S. No.
I. Is it all right that they disagree?
S. Yes.
I. It doesn't matter?
S. Well, they'll be made. If one man wins then these laws will be made, and if the other man wins, then their laws will be made.

BOY 4

I. Have you ever heard of political parties?
S. No.
I. What about the Democrats, have you heard of the Democrats?
S. My Mother always tells me what they are, but I always forget.
I. What about the Republicans, have you heard that word?
S. I think they're Americans.

I. What do you think the Republicans and the Democrats do?
S. Fight with each other.

I. Have you ever heard of political parties?
S. Yes.
I. What are the political parties in our country? What are the names of them?
S. Democrats and Republicans.

I. What do the Democrats and the Republicans do?
S. Well, some people voted for em and they try to be President or government.

I. If you could vote do you think you'd be a Democrat or a Republican?
S. Republican.

I. How important do you think it is for the Republicans to win this election? Do you think it's very important?
S. Yeah.

I. Why do you think some people are Democrats and other people are Republican?
S. Well, the Democrats live in a different country than the Republicans. Republicans are Americans and the other ones are different kind of countries.

I. So what's the difference, do you think, between the Democrats and Republicans?
S. Well, they live far away and they're different; they have different things.

I. If you could have voted in the last election do you think you'd be a Democrat or Republican?
S. Democrat.

I. How important do you think it was that the Democrats won the election. Do you think it was very important, or just sort of important, or not too important?
S. Well, it's not too important because it doesn't matter who's it cause, well, some people think that one of em are better then the other sometimes.
I. Do you think that's true, Do you think one is better than the other?
S. Well, maybe, he might not.

I. Why do you think that some people are Democrats and some people are Republicans?
S. Well, they think that one man's better than the other.
I. Do you think the Republicans and Democrats are different?
S. Yes.
I. How are they different?
S. Mmm, um, cause they're a different group.
I. Think they maybe want different laws?
S. Maybe I think the same.

COMMENT:

Pretest responses of Boy 4 portray one of the most fascinating misconceptions we have encountered.

Pretest

BOY 5

I. How do you think he (the President) gets that job?
S. By the uh...I don't know.
I. Have you ever heard of political parties?
S. No
I. Have you ever heard of Democrats?
S. I heard of em.
I. What about Republicans? Have you heard of them?
S. (Negative.)

I. Now, can you tell me what the Democrats do? What do you think they do?
S. Oh....
I. Well, when you hear people talking about them what do they say? About the Democrats?
S. Like em.

I. If you could vote who do you think you would vote for, the Republicans or the Democrats?
S. Republicans.
I. That's the one...
S. That's Johnson.

Posttest

I. How do you think the President gets his job?
S. By voting.
I. Have you ever heard of political parties?
S. (Affirmative.)
I. What are the names of the Political parties?
S. Republican and Democrat.

I. Can you tell me what the Republicans and Democrats do?
S. Well, they write down the things that they're gonna do; they have a secretary that does it. They make speeches, everybody gets buttons,...
I. Anything else they do?
S. I can't think of any more.

I. If you could have voted in the election we just had do you think you would have been a Democrat or a Republican?
S. Democrat.

GPO 810-557-3

BOY 6

I. Have you ever heard of political parties?
S. ....
I. Have you heard of Democrats?
S. Yeah.
I. Ever heard of Republicans?
S. (No.)

I. Can you tell me what the Democrats do?
S. I don't know what they do; I read it on cars.

I. If you could vote do you think you'd be a Democrat, a Republican or neither one?
S. ....
I. Do you have any ideas of what you'd be?
S. ... I don't even know what they mean.

I. Have you ever heard of political parties?
S. We had one in our room.
I. Oh, you did? Well, what are the names of some political parties in our country? Do you know the names of some political parties?
S. Uh uh.
I. Have you ever heard about the Democrats?
S. Yeah.
I. And the Republicans?
S. (Affirmative.)
I. What do you think the Democrats and Republicans do?
S. Well, it's just like Democratic. You vote for Johnson and if you're for Republicans you vote for Goldwater.

I. If you could have voted in this last election, do you think you would have been a Democrat or a Republican?
S. Democratic.

GIRL 6

I. What do the Republicans and Democrats do?
S. I don't know.

I. Those are political parties. What do the Republicans and the Democrats do?
S. Um, they vote for a person, and they try to get the other people to vote for him.

BOY 7

I. Have you ever heard of political parties?
S. Yes.
I. What are the names of some of the political parties in this country?
S. I don't know much about political countries, parties.
I. Well, have you ever heard of the Democrats?
S. Yes, and the Republicans...yeah, I didn't know what they were.

I. Can you tell me what the Democrats and Republicans do?
S. They run against each other.

I. If you could vote do you think you'd be a Republican or a Democrat or....
S. Maybe both, I'd be a Republican for Percy and a Democrat for Johnson.

I. Have you ever heard of political parties?
S. Yes.
I. What are some political parties that you know?
S. It's a party that goes around and tries to make people vote for their leader.
I. And what are the names of some political parties that you've heard about?
S. The only ones that I've heard about is Democrat and Republican.

I. If you could have voted in this last election do you think you would have been a Democrat or a Republican? Or neither one?
S. I'd split my ticket.
I. How would you split it?
S. I'd vote for Johnson and, um, Percy.

BOY 8

I. Have you ever heard of political parties?
S. ....
I. Have you ever heard of Democrats?
S. Democrats, yeah, I think it's voting.
I. What about Republicans? Have you ever heard of them?
S. But I don't know what they are.

I. Have you ever heard of political parties?
S. Yeah.
I. Can you think of the names of some political parties?
S. Um, No. I can't, um.
I. Can you think of some of the names that you've heard?

I. Can you tell me what the Democrats and the Republicans do?
S. Work um... stand and talk to the whole, like who goes to the thing, they talk to, um, and they talk to the people.
I. Did you ever see them do that?
S. On television.

I. If you could vote do you think you'd be a Democrat or a Republican?
S. Um, a Democrat?

S. Um. Democratic Party?
I. Uh huh. That's right.
S. And Republican.

I. Right um. What do you think that the Democrats and Republicans do?
S. Um, they're against each other.
I. Uh huh.
S. Like Goldwater is a Republican and um Mr. Johnson is a Democrat and like uh they make speeches like fighting.
I. Uh huh. What do they talk about when they make speeches like that? What sort of things?
S. They talk about, um, like this: "Work men; we have to make speeches," and all that.
I. Uh huh. Did you ever see them make speeches?
S. Well no, but my Mom does. She sees em on television.
I. If you could have voted in this election whom do you think you would have voted for? Would you have been a Democrat or a Republican?
S. Well, if I was 21?
I. Uh huh.
S. Who would I vote for? I would vote for the Democrats.
I. Democrats?
S. Cause I like Mr. Johnson better than Mr. Goldwater.

Campaigns, Elections, and Speech-Making

COMMENT:

Many of the children are aware of the large quantity of material (e.g., signs, bumper stickers, etc.) which political campaigns produce. These materials are rarely related, however, to the electoral process. Responses of Girl 7 indicate that she developed a clearer understanding of the process during our instruction.

Pretest

GIRL 7

I. Have you seen any cars with bumper stickers on them?
S. .....No.
I. No?
S. We have one.
I. Oh, you do; what kind do you have?
S. I, wait a minute, L. B. Johnson; yeah.
I. Why do you think people put stickers like that on their cars?
S. Cause they want them.
I. Well, why? Can you figure out why they might want to do that?
S. That's all I could think of; they wanted them.

GIRL 8

I. Have you seen the bumper stickers some cars have on the back?
S. Yes. And some have them on the top.

Posttest

I. Have you seen any cars with bumper stickers on them?
S. (Affirmative.)
I. Why do you think people put those on their cars?
S. They are voting for em.

I. In the national campaign people had bumper stickers. Did you see those?
S. Yeah, but we couldn't, my dad couldn't, have one.

I. Do you think it's a good idea to have these signs?
S. Yes, but not a businessman like my father, because if he goes around and everything, and people who want to vote for Goldwater, it's not very nice to advertise that; and that's why he doesn't have a Johnson sticker.
I. Why not?
S. Because he's a business....
I. OK.
S. And because some people might have wanted to vote for Goldwater, and it's not nice to have stickers when you go around, and he goes around.

COMMENT:

Some of the children knew the purpose of the various party advertisements before we interviewed them. The little girl quoted below, for instance, knew their purpose. Girl 8 illustrates, however, that in some families elections can be the occasion for learning important political norms. Girl 8 has learned, for instance, that other things are more important than politics.

One very good way to test the child's understanding of the electoral process is to ask about the meaning of campaign speeches. It is remarkable that much campaign activity goes on without the child's comprehending its meaning. We are encouraged to discover that simple instruction overcomes this barrier to further understanding. The quotations below present the development of a link between speeches and voting. Furthermore, it is clear also from the posttest responses that the children understand that people vote in order to select a President.

Pretest	Posttest
BOY 9	
I. How about political campaigns? Do you know what that is?	I. How about a political campaign? Do you know what a political campaign is?
S. No.	S. My Mom was talking to me about that and I forgot.
I. Men make speeches, and things, Why do you think these men make speeches?	I. That's when men make speeches and things. Did you see any of the men make speeches?
S. I don't know.	S. Yes, I once went, um, at where, at daytime, where that busy corner is, um, by the street and I say, um, I think it was Johnson making a speech.
	I. Why do you think men make those speeches?
	S. So people will vote for them.
GIRL 9	
I. Have you seen any men on television or making speeches? On the radio, political speeches?	I. Have you seen any men making speeches lately? Political speeches?
S. I hear the news sometimes.	S. Yes.
I. Uh huh.	I. Uh huh.
S. Every night.	S. My mommy and daddy watch em.
I. Uh huh, and they make speeches?	I. Uh huh, What kinds do they watch?
S. Yes.	S. .....
I. What do they talk about when they make speeches; can you remember?	I. Do you remember who any of the men were?
S. They tell what people have been doing, if there was a fire or not, or they tell all the things that has been happening, and some of 'em tell about ball games.	S. I think one of 'em was John Ray.
	I. Do they watch on television?
	S. Yes.
	I. What was the man talking about when he was making the speech?
	S. War.
	I. What did he say? Do you remember?
	S. No.
	I. Well, why do you think men make these speeches?
	S. To get more people to vote for their man, men.
BOY 4	
I. Well, have you heard any men making speeches lately?	I. Have you heard anybody making speeches lately?
S. Yeah.	S. Yes.

I. What were they talking about?
S. Well, the last time I heard President Kennedy speaking he was talking about America and how much he likes it, that was, um, when he died, and there was no program except that on each channel.

I. Why do you think people make speeches like that?
S. Well, to tell different people about America and things and that they live in America and things like that.

I. Yeah, what about political campaigns, do you think it's a good idea to have those?
S. Mhm.
I. What do you think goes on in a political campaign?
S. I don't know what that is, anyway.

I. Hmm, have you heard any men making speeches lately? Political speeches? On television maybe, or read about it in the newspapers?
S. I haven't.

I. In November we're going to have an election. Why do you think we have elections?
S. Umm... what are they?
I. Well, can you tell me what happens in an election? Have you heard people talking about elections? Or about voting?
S. Yeah.
I. What's voting like...Can you tell me? What happens?
S. You vote about, uh, Presidents or Johnson.

I. Uh huh, that's right; and what happens to the man who wins the election?
S. Um. Guess he gets to be, um, President.
I. Yeah, that's right, What happens to the man who loses?
S. He's got to go back to his old job.

I. What kind of speeches were they? What were they talking about?
S. They were talking about why they wanted to be President what they were going to do.

I. Why were they making a speech like that do you suppose?
S. Well, so they'd have such a good speech that they'll convince the other people that they'll vote for em.

I. What do people do in a campaign?
S. Uh, let's see um...uh, let's see... I don't know.

I. Well, have you heard any men making speeches?
S. Yeah.
I. Well, why would they be making speeches?
S. So people would vote for him?
I. Uh huh. What do they talk about in their speeches?
S. I don't know.
I. What sort of things do you think they say to make people vote for them?
S. Oh....

I. What would they talk about?
S. The President?

I. Well, a few weeks ago we had an election. Why do you think we have elections?
S. Well....
I. What's the election for?
S. Um... I don't know, but I do, um, know how many times we have elections.
I. How many times?
S. Uh, four times a...No, I mean 3 or 4 years. We have one every 4 years.
I. Every 4 years, Uh huh. And what happens at the election?
S. Um. They try to vote for whoever wants, whoever they want, uh, to be President.

I. Uh huh. And what about the man who wins the election?
S. He gets to be the President.
I. Uh huh. And what about the man who loses?
S. Um, what is, oh, what do you call that, um, oh... oh let's see, Vice President.

GPO 810-357-2